IT Sem V
OS for computation Devices
10/5/13

Con. 7048–13. **GS–8796**

(3 Hours) **[Total Marks : 100**

N.B. (1) Question No. **1** is **compulsory.**
(2) Attempt any **four** questions from the **remaining** questions.
(3) Assume **suitable** data whenever **necessary.**

1. (a) What is disk scheduling ? Explain various disk scheduling algorithms. **10**
   (b) Explain various system calls with appropriate syntaxes. **10**

2. (a) Explain necessary and sufficient conditions for deadlock, also explain how a resource allocation graph determines a deadlock. **10**
   (b) What is Kernel ? Describe briefly the approaches of designing Kernel. **10**

3. (a) Draw and explain architecture of RTOs. **10**
   (b) Explain programmed I/o and DMA. **10**

4. (a) What is semaphore ? Explain different types of semaphores. **10**
   (b) Write a short note on File Access Methods. **10**

5. (a) What is mutual exclusion ? Explain Peterson's algorithm for mutual exclusion. **10**
   (b) What are the characteristics of real time systems ? **10**

6. (a) What are preemptive and non-preemptive algorithms ? Explain any two with the help of example. **10**
   (b) Write a short note on buffering techniques. **10**

7. Write short notes on :— **20**
   (a) User threads and Kernel threads
   (b) Race conditions
   (c) Demand paging
   (d) Monitor.

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